BACKGROUND

Since the commercial introduction of the personal computer (PC) in the late 1970s, computer-based information technologies (IT) have been increasingly adopted and used in American households. Many experts and policymakers believe these technologies will have profound social impacts, and the steady expansion of the Internet in the 1990s has triggered a new wave of interest in the impacts of IT on the American home and family.

This report represents a 20-year retrospective on what we know and do not know about how information technologies are adopted and used in the home and with what consequences. In most respects, data and research on these questions are limited: fewer than 10 major data sources exist that address these issues in a broadly generalizable way, and only 30 major conceptual and empirical works were identified. On the other hand, the rapid diffusion of computer-based home informatics has only recently begun—the fastest rates of growth have been in the past 5 years, particularly as the cost of PCs has dropped to under $1,000. An inventory of the existing data and literature is thus a crucial exercise for anticipating the likely impacts of IT in the home and for highlighting gaps in knowledge.

Although the variety of information technologies for the home is vast, the data resources and literature covered here reflect two very specific types of IT: home computers and home Internet linkages,[3] not the full spectrum of home informatics or the ways in which people can access the Internet outside the office (such as in libraries, kiosks, or Internet cafes). Excluded too are uses and applications of IT related to, for example, telephones, faxes, and other types of telecommunications equipment; VCRs and television-based media; audio technologies; "smart" appliances; and "smart house" technology.[4] These were determined from the outset to be outside the current scope of work.

The social impacts of IT in the home can be either outside or inside the household. *External impacts* would reflect, for example, the influence of home IT on culture and values, democratic participation, or social cohesion. *Internal impacts* would address changes in individuals, the family, or home-level dynamics. This study addresses only internal impacts. The data and literature on home IT discussed here focus on family- and household-level dynamics of IT; research involving individual effects are included if the context of the research is generally home computing or personal Internet use. Excluded, therefore, is research that relates to the impacts of home IT on business or society. For example, the substantial literature on the impacts of telecommuting on business productivity, job satisfaction, employee turnover, and other economic benefits is not addressed here. Similarly, the philosophical literature on the role of home IT in society, culture, democracy, and psychological perceptions of time and space, as well as other broad external impacts, was excluded.

The report is organized into six major sections. The first is an overview of the state of knowledge and inquiry into the adoption and impacts of IT in the home, and the second presents a conceptual framework for analysis of these issues. The next three sections summarize the research and findings related to access to home IT and adoption dynamics, patterns of IT use, and the impacts of IT on the home and family. The concluding section discusses the information gaps and analytical needs in this field of inquiry.

[3]Note that there is increasing diversity in technical access to the Internet; for example, through television (Web TV) and telephone. Such alternative mechanisms are not explicitly addressed in this study; most of the research reviewed here assumes Internet access through a PC.

[4]For useful discussions of home informatic technologies, see Miles et al. (1988), chapter 5; Cawson, Haddon, and Miles (1995); Miles (1988); and Venkatesh (1996).